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Accelerated Surgical Stay Programs

A Mechanism to Reduce Health Care Costs

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Objective

To increase cost-efficiency while maintaining the standard of medical care, an accelerated surgical stay program for patients having breast surgery was instituted.

Summary Background Data

In the past 20 years, annual health care costs have soared and now comprise 12.2% of the United States gross national product. The annual inflation rate of almost 11% has prompted third-party payers to scrutinize hospital costs as hospitals now consume 38% of health care costs.

Methods

A multidisciplinary task force was formed to analyze and reduce lengths of stay for breast surgeries and to standardize clinical protocols to address ensuing issues.

Results

After 1 year, this prospective study found a 39% decrease in average length of stay and a 22% increase in patient volume. This was also accompanied by a low incidence of surgical complications. Through information obtained from 373 consecutive patients through telephone surveys and questionnaires, the Center for Cost-Effective Care reported high patient acceptance and satisfaction.

Conclusions

As a management strategy, accelerated surgical stay programs increase operating efficiency and reduce medical care costs without compromising quality of patient care. Success of this program was attributed to support from senior management, expansion of available educational resources for patients, and to a carefully planned transition from the program's developmental to its operational phase.

Annual medical care costs have increased rapidly in the past 20 years because of burgeoning biotechnology, inflation, the effect of litigation, and the design of programs by government and industry to increase the supply and demand for medical care.[1] Health care costs now comprise 12.2% of the United States gross national product.[2] The inflation rate for annual health care expenditures hovers at 10.54%, which understandably causes third-party payers to scrutinize how medical dollars are spent. Hospitals consume 38% of health care costs.[2] To develop effective, medically sound cost-containment strategies within existing institutions is our challenge.

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Medicare and other payers[3–5] have adopted a prospective hospital payment system that has increased the focus on surgical use in the United States. With this system, each hospital discharge is assigned to a specific diagnosis-related group. Based on the assignment of the diagnosis-related group, a relatively fixed payment is made to a hospital for each discharge. Limited additional payments are made to the hospital for "outliers," patients incurring especially high costs, due to lengthy stays or unusually high costs for specific patient care.[6]

One strategy for containing these costs is length of stay (LOS) management. To date, most institutions have reduced LOS by implementing "generic approaches" focused on changing programs that affect large groups of patients. Elimination of selected preoperative surgical days through establishment of a preadmission test center or same-day surgery unit is an example. Another is increased efficiency of the discharge process and advance planning to avoid prolonging admissions. The introduction of a peer review process, such as the utilization review program, monitors inappropriate admissions and LOS.

Another primary method to reduce LOS is exemplified by admission-specific approaches, which focus on groups of patients with similar needs in order to evaluate their associated care plans. The best examples of this group are patients who are chronically ill or whose care is very costly, such as patients with closed head trauma or burns and those in neonatal intensive care units. In these specific cases, more customized treatment plans for inpatient as well as outpatient services can be designed to satisfy patient requirements and still maintain cost-effectiveness.

Admission-specific strategies designed to address the needs of larger groups of patients with more common and routine problems have been missing from LOS management approaches. We describe an accelerated surgical stay program for primary breast cancer patients to be used as a template by other institutions that want to establish similar programs to reduce LOS without compromising patient satisfaction or overall quality of care.

Breast cancer is one of the most common cancers in American women, with approximately 175,000 new cases occurring each year.[7] Most of these women are treated surgically by total mastectomy and axillary lymph node dissection (modified radical mastectomy) or by a breast-conserving approach consisting of limited surgical excision and axillary lymph node dissection followed by radiation therapy. To reduce LOS after major breast surgery, our institution introduced an accelerated surgical stay program that substantially reduced the LOS for these patients without measurable detriment to their health or satisfaction. To achieve these goals, a multidisciplinary task force re-examined delivery of care. Under the leadership of an administrative facilitator, a program was developed (1) to standardize clinical protocols; (2) to prepare patient educational materials; (3) to streamline administrative procedures; and (4) to develop mechanisms to evaluate the program's effectiveness. The resulting program has contained costs without jeopardizing quality of care.

MATERIALS AND METHODS

Program Development

A multidisciplinary task force endorsed by the Chief of Surgery and the Chief of Surgical Oncology explored how LOS for breast surgery patients might be decreased while maintaining a high standard of quality care. Representatives from each group of care givers most directly involved during the preoperative, perioperative, and postoperative periods were recruited. Thus the task force included surgeons, plastic surgeons, nurses, social workers, physical therapists, hospital administrators, and representatives from the preadmission test center, the admitting office, and the Center for Cost-Effective Care. The facilitator chosen to head the program was a postgraduate MBA fellow with 4 years of work experience.

The task force began by comparing the practice pattern data of the Brigham and Women's Hospital with the practices at other institutions nationwide, including the Cleveland Clinic Foundation, the M.D. Anderson Cancer Center, and the Fox Chase Cancer Center. After comparative data analyses, the task force adopted the following average LOS targets: 2 days for mastectomy with or without axillary lymph node dissection, for partial mastectomy with axillary dissection, or for axillary lymph node dissection alone; 2.5 days for mastectomy with implant or tissue expander reconstruction; 4.5 days for mastectomy with autologous tissue flap reconstruction.

To achieve these goals, a program was designed that included four key components.

Standardized Clinical Protocols

The task force agreed on two principal clinical protocols. One protocol was drafted for all patients not receiving reconstruction and the other for patients having reconstruction immediately after mastectomy. The task force decided that patients would leave the hospital with surgical drains in place. Each of the participating surgeons agreed to use a Jackson-Pratt (American Heyer Schulte Corp., Goleta, CA) closed-suction drain so that patient teaching could be standardized. Because no change in anesthesia technique was anticipated, a specialized care plan for the anesthesia department was not required.

Preprinted physician orders and operative note sheets

were used to increase efficiency and data collection. A consensus was reached among surgeons and physical therapists regarding the postoperative exercise program. Educational pamphlets were prepared, including information on drain care, exercise programs, resumption of physical activity, and follow-up care. These pamphlets were distributed to the patients by inpatient nurses and provided an important source of information, including names and telephone numbers of medical personnel for the patients after discharge.

Patient Educational and Emotional Support Materials

Preoperative instruction by the operating surgeon was seen as central to the accelerated stay concept. The task force agreed that goals should be established during the initial discussions of the surgical plan regarding the patient's anticipated LOS, discharge planning, and drain care. These issues would be introduced and explained by the surgeon. In addition, the task force felt strongly that when medically prudent the physician should present the option of immediate reconstruction to those patients requiring mastectomy. The need for preoperative teaching by the preadmission test center nurse and the anesthesiologist was also recognized in the program's early stage of development as being vital to its success.

In addition to preoperative teaching, the task force determined that supplementation of these verbal instructions with written material would be essential to the program's success; therefore patients would be provided with educational materials at discharge. Using the existing resources of the American Cancer Society and the National Cancer Institute, a bibliography of nine brochures was assembled. Topics included were breast surgery options, care after breast surgery, adjuvant therapies, insurance issues, sexuality, and cancer in general. Patients also received an 8-page Brigham and Women's Hospital brochure, *Breast Surgery: A Guide for Patients*, which explained in detail the anticipated course of treatment at the hospital, including the expected LOS and the planned discharge home with a drain. A commercially prepared video tape was also distributed to the patients through their surgeons' offices. This video, *Breast Cancer: A Personal Challenge*,[8] addressed the emotional aspects of breast surgery. A second video, *Significant Journey*,[9] which discussed the recovery process after breast surgery, was available for patients to purchase.

To publicize the availability of social workers and mental health professionals, mechanisms were established to encourage self-referral and direct referrals from surgeons and nurses.

"Reach for Recovery," a peer visitation program established in conjunction with the local chapter of the American Cancer Society, was made available to interested patients. This program consists of former Brigham and Women's Hospital breast surgery patients who provide peer support to new breast cancer patients on a one-on-one basis. The program enables volunteers who have been jointly trained by the hospital and the American Cancer Society to meet with patients before, during, or after hospital stay. The familiarity of these former patients with the breast surgery program allows them to reinforce the positive expectations established by the program care givers while providing peer emotional support.

Streamlined Administrative Procedures

The preexisting flow of breast surgery patients through the hospital had to be considered before a more efficient program could be designed. At each step of this process, changes were made to reinforce expectations of a short hospital stay and discharge home with a drain in place. The operations and functions of the preadmission test center were streamlined and upgraded to include additional teaching for breast surgery patients. Preprinted admission sheets and orders were generated that included suggestions for pain medications. Extensive nursing in-service programs were performed to standardize the care of the breast surgery patients regarding expectations, exercises, drain care, and improvement in body image. Available sources of emotional support for the patient were also discussed in the nursing in-service sessions, and nurses were encouraged to initiate referrals for appropriate patients.

Our mastectomy patients have routinely been given temporary breast prostheses, "puffs," to wear during the early recuperative period before they can be fitted for a permanent breast prosthesis. Patients have appreciated these temporary prostheses because they allow patients to maintain body image and self-esteem during recuperation. Past delays in obtaining temporary prostheses have sometimes postponed hospital discharge. This potential delay was eliminated with the institution of a system that included preadmission referral to a supplier of prosthetic devices and an inpatient floor stock of temporary prostheses. A publication listing American Cancer Society-approved fitters and suppliers of permanent prostheses was also distributed to the patients.

Evaluation Program

To assess the efficacy of the breast surgery program, an evaluation process was designed by the Center for Cost-Effective Care in conjunction with task force members. Arrangements were made to collect (1) utilization data from the Brigham and Women's Hospital Management Information System; (2) patient satisfaction data from a 6-week postdischarge telephone survey; and (3) patient

outcome data from a 3-month postdischarge patient satisfaction and functioning questionnaire.

Implementation

The breast surgery program was ready for implementation after the standardized clinical protocols were written, the educational and emotional support materials prepared, the administrative procedures streamlined, and the evaluation process designed. When the program began, 12 surgeons who together performed approximately 80% of the breast surgeries at Brigham and Women's Hospital chose to participate. Program expansion was planned to include other providers after this initial pilot group gained experience with the program.

Statistics

The average LOS for each quarter year was calculated and the significance tested using the Kruskal-Wallis statistical test. Average length of stay (ALOS) during the preplanning period was compared with the ALOS during the implementation period, which began in the fourth quarter of 1989.

RESULTS

Results at the end of the first year of this program were encouraging. Overall reduction in LOS approximated the target goals and was accomplished without any measurable detriment to patient satisfaction or quality of care.

Specifically, as shown in Figure 1, the target goals adopted before program implementation for both partial mastectomy and mastectomy with or without axillary lymph node dissection were attained overall; however the goals defined for breast surgery accompanied by reconstructive procedures were not consistently achieved.

Utilization Trends

Patient dispositions were defined using ICD-9-CM codes. Table 1 depicts the average LOS used for participating physicians before planning began, during the planning phase, and during the first year after implementation of the program. The ALOS of participating physicians before the planning was 4.54 days. As can be seen in Table 1, LOS was reduced significantly, even during the planning phase. It appears that during this phase, several physicians incorporated portions of the program into their own practices with some success. The ALOS during the first year of implementation was 2.77 days, a 39% decrease from the preceding time period ($p < 0.05$, two-sided). This is depicted in Figure 2.

When this reduction in ALOS is translated into health care dollars, the savings to third-party payers and to consumers are dramatic. Based on a daily room and board charge of $625 per patient, the cost of hospitalization alone as a result of decreased ALOS is reduced by more than $1200 per patient. As 276 patients participated in the program in the year after its implementation, the cost benefit realized in terms of health care dollars during the first year of the program was more than $315,000. Even when the cost of educational materials, standardized orders, and return office visits are factored into the assessment of the program's cost containment, the sum would consume only a small fraction of this savings.

The number of patients in the breast surgery program is displayed in Table 2 and Figure 3. The number of patients in the first year after implementation was 276, which represents a 22.1% increase in volume compared with the year before the program was implemented. This increase was reassuring to physicians and administrators, because the 39% reduction in ALOS did not appear to adversely affect the number of patient referrals or the surgical volume. As can be seen in Table 2, the volume of patients participating in the program continues to increase.

Patient Satisfaction Telephone Survey

To assess patient satisfaction after breast surgery, a telephone survey was conducted by the Center for Cost-Effective Care 6 weeks after discharge. Patients were enrolled consecutively during the selected preplanning and postimplementation time periods. Three hundred thirteen breast surgery patients were interviewed, which represented an 84% compliance rate among those asked to participate. The survey consisted of approximately 90 questions, with an average completion time of 30 minutes.

Of the patients questioned regarding LOS and discharge with drains in place, 83% discharged home with a drain felt that their LOS was acceptable; only 14% felt that it was too brief. However, 73% of the patients discharged home without drains felt the LOS was acceptable, and 25% felt the LOS was too brief. There is no statistically significant difference between these groups. Of these same patients, 90% of those discharged home with a drain felt they had received excellent or very good care, whereas 85% of the patients discharged home without a drain had the same feelings. Once again, there is no statistical difference, and the overall results indicate a very high degree of satisfaction in both groups of patients. When asked whether they would recommend this hospital to their family or friends, 98% of the patients who were discharged with a drain responded affirmatively, and 93% of the patients who were discharged without a drain responded similarly, which also represented no statistical difference. Thus, these data suggest that be-

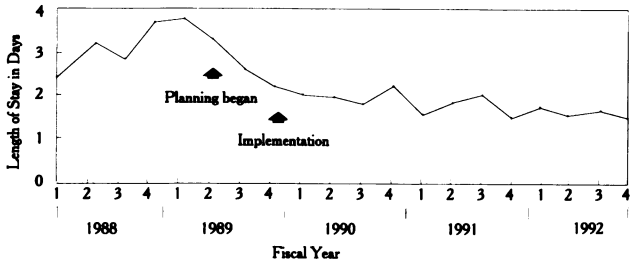

Figure 1a

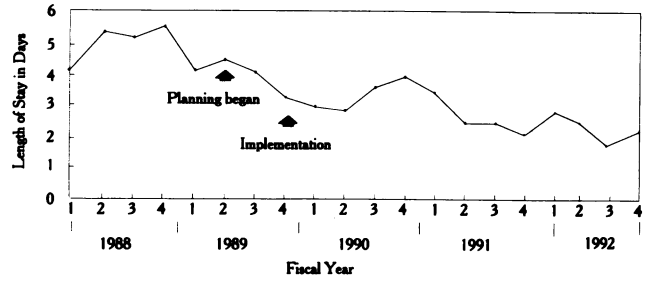

Figure 1b

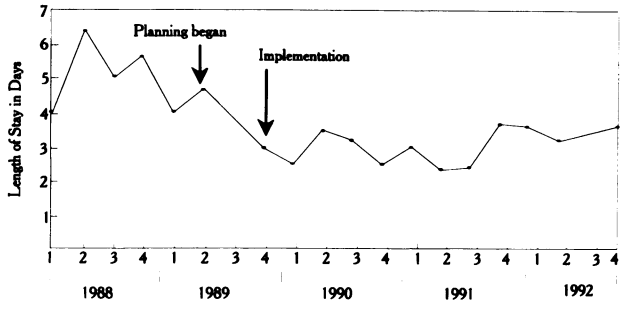

Figure 1c

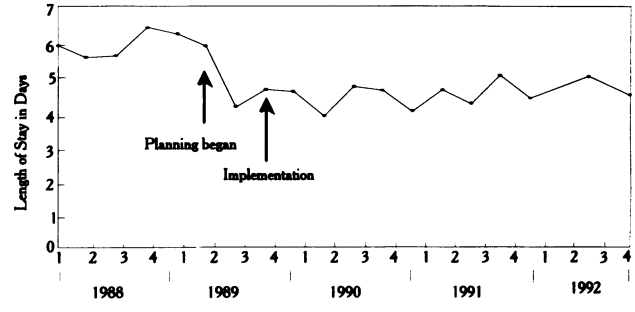

Figure 1d

Figure 1. Average LOS for patients who had (a) partial mastectomy with or without axillary node dissection; (b) mastectomy with or without axillary node dissection; (c) mastectomy with implants or tissue expanders; and (d) mastectomy with flap reconstruction.

ing discharged with a drain in place as a result of a shortened LOS did not adversely affect patient satisfaction.

Patient Outcome Data

The Center for Cost-Effective Care examined the relation between case-mix, process, and outcome characteristics of 373 (consecutive) breast surgery patients discharged from Brigham and Women's Hospital between 18 September 1989 and 28 November 1990. Data were obtained for this from chart review, patient questionnaires mailed 3 months after discharge, and Computer-assisted Hospitalization Analysis for the Study of Efficacy, which encompasses an entire department at Brigham and Women's Hospital and is based on a program developed in-house to support all the reporting needs of the institution.

Only one patient in this series required readmission for a wound infection. Two additional patients were treated as outpatients with oral antibiotics for minor wound dehiscence. One patient required reoperation for bleeding. Table 3 summarizes the incidence of complications that were seen in 373 consecutive breast surgery patients. The 30-day mortality rate was 0%.

Functional status (comparing preadmission and 3 months after discharge) with respect to basic activities of daily living showed a premean score of 98.1 (range, 0 to 100) and a postdischarge score of 97.8 ($p > 0.05$). With regard to mental well-being, patients significantly scored themselves better after discharge (72.8; range, 0 to 100) when compared with preadmission (65.9; $p < 0.001$).

Patients had drains removed in the surgeons' offices or on the hospital's surgical oncology floor (during weekends). This alleviated the need for unexpected emergency ward or private physician office visits. Drain problems were managed by the private surgeon or by the hospital's surgical residency staff.

DISCUSSION

Our prospective study shows a 39% reduction in ALOS in 1 year using an integrated multidisciplinary approach for breast surgery patients. The cost-effectiveness of this accelerated LOS program was reflected by a $1200

Table 1. BREAST SURGERY PROGRAM ALOS TRENDS—ALL BREAST SURGERY PATIENTS

Stage	Average Length of Stay (ALOS)*
Pre-Planning	
1988 Q2	4.4
1988 Q3	4.4
1988 Q4	4.9
1989 Q1	4.5
Planning	
1989 Q2	4.1
1989 Q3	3.6
Implementation	
1989 Q4	3.0
1990 Q1	2.6
1990 Q2	2.7
1990 Q3	2.8
1990 Q4	3.2
1991 Q1	2.6
1991 Q2	2.5
1991 Q3	2.6
1991 Q4	2.5
1992 Q1	2.6
1992 Q2	2.7
1992 Q3	2.6
1992 Q3	2.6

Q = Quarter.
* $p < 0.5$, 2-sided.

Table 2. BREAST SURGERY PROGRAM VOLUME TRENDS—ALL BREAST SURGERY PATIENTS

Stage	No. of Patients in Program
Pre-Planning	
1988 Q2	60
1988 Q3	48
1988 Q4	55
1989 Q1	63
Planning	
1989 Q2	60
1989 Q3	57
Post-Implementation	
1989 Q4	72
1990 Q1	69
1990 Q2	67
1990 Q3	68
1990 Q4	81
1991 Q1	68
1991 Q2	83
1991 Q3	98
1991 Q4	91
1992 Q1	104
1992 Q2	98
1992 Q3	94
1992 Q4	86

Q = Quarter.

per-patient reduction in hospitalization costs alone. Based on 276 participating patients during the first year, this resulted in a net savings of more than $315,000 after the administrative costs were considered. As more patients participated in the program during the subsequent years, the cost benefit realized grew to greater than $400,000. Initiation of similar programs for all breast surgery cases nationwide (approximately 175,000) would equal a potential savings of $110 million each year.

As in the study by Orr and colleagues,[10] a central feature of early discharge involved sending patients home with drains in place. However, in our experience several other organizational elements were essential to the successful development and implementation of this reduced surgical stay program. These elements included (1) creation of a multidisciplinary task force for program development; (2) oversight by a neutral, unbiased program facilitator; (3) support from senior management; (4) a central focus on patient care and education as well as on reducing LOS; and (5) a well-planned transition from the developmental to operational phase.

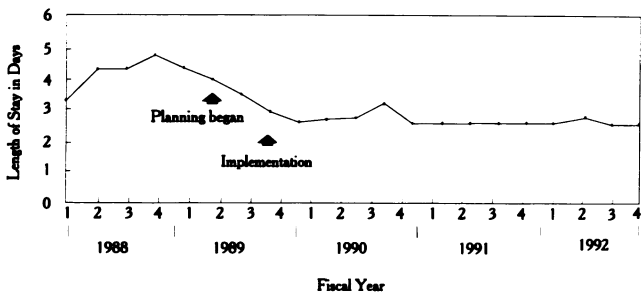

Figure 2. Average LOS for all patients who had breast surgery before, during, and after the initiation of the accelerated surgical stay program.

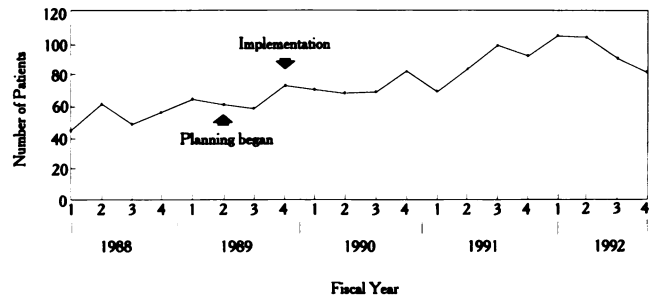

Figure 3. Volume of all breast surgeries performed throughout the planning and implementation stages as well as the increase in the number of procedures performed after inception of the accelerated surgical stay program.

Table 3. INCIDENCE OF SURGICAL COMPLICATIONS

Surgical Complications	Incidence (%)	Patients
Minor wound dehiscence	0.5	2
Wound infection	0.3	1
Hemorrhage	0.3	1
Gastric stress ulcer	0.3	1
Neuropathy	0.3	1
Bacteria	0.3	1
Seroma	0.3	1
Lymphedema	0.3	1
Myocardial infarction	0.0	0
Coma	0.0	0
Pulmonary embolism	0.0	0
Pneumonia	0.0	0
Congestive heart failure	0.0	0
Stroke	0.0	0
Urinary tract infection	0.0	0
Renal failure	0.0	0
Acute tubular necrosis	0.0	0
Flap necrosis	0.0	0
Cellulitis	0.0	0
Extrusion/displacement of implant	0.0	0

N = 373.

Multidisciplinary Task Force

An accelerated surgical stay program requires coordination of the activities and administration of multiple hospital departments as well as implementation of fundamental changes in managing large patient groups. Establishment of a collegial, multidisciplinary task force comprised of members of all involved departments and specialties was critical to the design of this successful program. Essentially no modifications were required in progressing from the pilot phase of the program to its implementation because the initial planning was so fastidious that the issues of all departments involved were already addressed. Furthermore, because all these departments participated in the development of the program, all became vested in achieving its operational success.

Neutral Program Facilitator

In designing our task force, an administrator rather than a clinician was chosen to head the task force because we felt an administrator might serve as a more neutral figure in coordinating the changes required of several hospital departments. Furthermore, the time commitment required to head the task force proved substantial, and a busy clinician may have had difficulty meeting these time demands. With a dedicated administrator, the task force moved quickly through the planning and implementation stages, taking full advantage of the initial enthusiasm of its members. Because this position was filled by an MBA fellow who was funded by a postgraduate grant, the task force did not incur any additional expense for salary.

Senior Management Support

The support of senior management and department chiefs was also essential to the program's success. It was clear to all task force members that the hospital was committed to the development of a short stay program for breast surgery patients. Adequate financial and manpower resources were made available to the task force. The hospital and the department of surgery showed a willingness to change existing protocols and allowed the task force the freedom and authority necessary to achieve such changes. Task force members felt that their contributions were valued by the institution.

Commitment to Maintaining Quality Patient Care

The program elements listed above reflect practical and administrative features necessary to develop a short surgical stay program. Although these elements were essential, it was equally important that task force members felt that maintaining quality patient care and improving patient education were central goals. Whereas task force members clearly recognized the financial realities driving the accelerated stay concept, their commitment to the project was maintained more by the recognized opportunity to standardize patient care without jeopardizing the quality of care delivered.

Participating departments also recognized direct benefits from this program design. For surgeons, the final program simplified care by providing preprinted orders and educational materials as well as more extensive patient teaching by the nursing department. The program's streamlining of social work and physical therapy consultations also reduced the surgeon's workload. The preadmission teaching and standardized educational materials facilitated discharge planning for nurses, as did the simplified process for obtaining breast prostheses. The program's explicit recognition of the importance of physical therapy and social work services was a positive feature for these departments.

The most important benefits from the breast program's design, however, were those realized by participating patients. Women having breast surgery through this accelerated stay program maintained greater control over and participation in their own care than with traditional breast surgery programs. They spent less time

away from their homes, their families, and their personal routines. Time spent in the "sick" role was minimized. Women cared for their own incisions and drains, and they were responsible for determining when the drain was ready for removal. As breast cancer treatment now often includes 6 to 8 weeks of radiation therapy or 4 to 6 months of chemotherapy, or both, as well as years of surveillance screening and follow-up, this reinforcement of the woman's autonomy and control early in the treatment process is very valuable. In an era when "empowerment" is a catchword in health care and elsewhere, early and direct involvement of patients in their own care is welcomed.

The strategies used to develop this accelerated surgical stay program for breast surgery patients can be applied easily to surgical patients having a variety of surgical procedures. Furthermore, this type of accelerated stay program could readily be adapted for use in smaller community hospitals where practicing clinicians are directly involved in hospital administration and financial issues more often than are clinicians in large teaching hospitals. In both large and small hospitals, it is important to target those surgical admissions with sufficiently high patient volumes to justify the administrative effort required for program development.

We are now exploring the feasibility of applying these strategies to shorten hospital stays for other patients, such as patients admitted for certain diagnostic and therapeutic procedures such as coronary angiography. It also seems feasible to institute similar programs for patients after uncomplicated myocardial infarctions, infections requiring antibiotics, management of hypertension, and other medical admissions with fairly predictable courses.

We have shown that fundamentally redesigning the process of care from the patient's perspective can result in a significant reduction in LOS without detriment to patient satisfaction or quality of care. This strategy supplements existing generic approaches to LOS management and case management approaches that concentrate on exceptional patients. As a management strategy, accelerated surgical stay programs promise to achieve increased operating efficiency and to reduce the cost of medical care without compromising quality of patient care.

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References

1. Drucker WB, Gavett JW, Kirshner R. Toward strategies for cost containment in surgical patients. Ann Surg 1983; 198:284–300.
2. Department of Health and Human Services. Health: United States and Prevention Profile 1991. Hyattsville, MD: U.S. Department of Health and Human Services, May 1992. DHHS Publication Number (PHS) 92-1232.
3. Grimaldi PL, Micheletti JA. Diagnosis Related Groups: A Practitioner's Guide. Chicago: Pluribus Press, 1982, pp 19–52.
4. Intergovernmental Health Policy Project: Recent and Proposed Changes in State Medicaid Programs, A Fifty State Survey State Survey. Washington DC: Intergovernmental Health Policy Project, 1984.
5. PPS/DRG scoreboard for insurers. Hospitals 1984;58:52.
6. Grimaldi PL, Micheletti JA. Prospective Payment: The Definitive Guide to Reimbursement. Chicago: Pluribus Press, 1985, pp 108–109, 129.
7. Boring CC, Squires TS, Tong T. Cancer statistics. CA 1991; 41: 111.
8. Breast Cancer: A Personal Challenge. Video produced by Professional Research, Inc., 930 Pitner, Evanson, IL 60202.
9. Significant journey. Video. Atlanta, GA: American Cancer Society.
10. Orr RK, Ketcham AS, Robinson DS, Moffat FL, Tennant ND. Early discharge after mastectomy: a safe way of diminishing hospital costs. Am Surg 1987; 53:161–163.